

Remarks/Arguments

Claims 1-20 are pending and claims 1, 10, and 11 are amended.

Responsive to the Advisory Action dated October 2, 2007, applicant has amended claims 1, 10, and 11 to more particularly pointed out and distinctly claim the subject matter that applicant regards as the invention. More particularly, applicant has amended claims 1, 10, and 11 to recite that for at least one of the relations the information describing the descriptor structure includes an indicator for a hierarchical level of each of the portions of the plurality of the common formats within the descriptors. Support of this feature can be found, for example, FIGs. 3 and 6 of the present application. An advantage of the claimed invention is that it makes easier to find the hierarchical level of a portion of a descriptor when only the position of the portion of a common format is known, e.g. as a query result.

By contrast, the teachings of EP 1225516 to Jahnke et al. (hereinafter, "Jahnke") and U.S. Patent No. 5,987,458 issued to Anderson et al. (hereinafter, "Anderson") requires one to recover a descriptor all the way up to the top level of the hierarchy to obtain the exact hierarchical level of a portion within the descriptor because Jahnke and Anderson, considered singly and in combination, do not disclose or suggest the feature that for at least one of the relations the information describing the descriptor structure includes an indicator for a hierarchical level of each of the portions of the plurality of the common formats within the descriptors, as recited in amended claims 1, 10, and 11.

Applicants strongly disagree that the ID in the first column of the element table in paragraph [0035] of Jahnke is an indicator for a hierarchical level of an element. As clearly shown in the table, an XML file is scanned from top to bottom and for each element encountered is assigned an ID of one more from the ID of the one last encountered with the one first encountered being assigned an ID of 1. In effect, the ID only indicates the position of an element among all the elements found in the XML file, and is similar to the term "word position" used in the present application when only the elements indicated in brackets (<Example>, <Element...>, etc.) are considered. In this example, the XML file has six elements 1-6 but only have three levels 0-2. As such, the Advisory Action is incorrect by interpreting the ID of 2 in the second row of the table as

an indication that that element in the second row is in the second level. In fact, the element in the second row is actually in the first, not second, level.

The "ParentID" in the second column of the element table of paragraph [0035] does not indicate the hierarchical level as well because in paragraph [0026] it clearly states that "ParentID" contains the "ID" value of the parent element. Although in the element table of paragraph [0035] the "ParentID" values are in fact identical to the hierarchical levels of the corresponding elements, they are not indicators of the corresponding hierarchical levels.

To help understand the above-mentioned difference, let us use the following XML file having a hierarchical level of 3 as an example:

```
<Example>
  <Element name="1" attribute1="aa" attribute2="ab">A text
    <SubElement attribute="cc"/>
    <SubElement attribute="dd">Another text</SubElement>
  </Element>
  <Element name="2" attribute1="ee" attribute2="ef"/>
  <Element name="3" attribute1="gg"/>
    <SubElement attribute="ff"/>
</Example>
```

According to the teaching of Jahnke, this XML file leads to the following element table:

ID	ParentID	XMLElementName	PCDATA
1		"Example"	
2	1	"Element"	"A text"
3	2	"SubElement"	
4	2	"SubElement"	"Another text"
5	1	"Element"	
6	1	"Element"	
7	6	"SubElement"	

As can be clearly seen, the range of the ID is from 1-7 and the range of ParentID is from 1-6, which in no way indicates the corresponding hierarchical levels of the elements identified by the respective ID values.

The disadvantage of the approach disclosed in Jahnke is that when only the position of a portion of a common format is known, e.g. as a query result, the descriptor has to be recovered all the way up to the top level of hierarchy to obtain sufficient

information about the hierarchy level of the portion within the descriptor. In the above example, when the "SubElement" with "ID"=7 was recovered, one has no way to know the hierarchical level of the element, even though one can conclude that this element is not a top level element because a parent element exists. However, to find out the hierarchical level of the "SubElement," the parent element, in this case the "Element" with "ID"=6, has to be recovered also. Since the element identified by ID 6 still have a parent element, the process continues until when the element, "Example," identified by ID 1 is found, where no parent element exists indicating that the element, "Example," is a top level element. Only then can one conclude that the "SubElement" with "ID"=7 is a 2nd level element.

By contrast, the element table (simplified) constructed in accordance with the principles of the invention would include level information similar to the one below:

ID	ParentID	XMLElementName	PCDATA	Level
1		"Example"		0
2	1	"Element"	"A text"	1
3	2	"SubElement"		2
4	2	"SubElement"	"Another text"	2
5	1	"Element"		1
6	1	"Element"		1
7	6	"SubElement"		2

Consequently, when the "SubElement" with "ID"=7 is recovered, the hierarchical level, 2, is immediately known from the "Level" column.

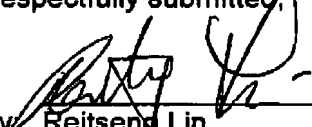
Although applicants agree that Anderson uses pointers that point to higher or lower hierarchical levels, the pointers do not indicate a hierarchical level of an element. They simply point to an element in a different hierarchy table. Given a pointer associated with a given element, you must trace the pointer all the way to an element that does not associate with a pointer in order to know the hierarchical level of the given element associated with the given pointer. An element without a pointer indicates that the element is in the first hierarchical level. By counting the number of pointers required to reach the top level element, one can derive the hierarchical level of a give element. As such, Anderson suffers the same defect as Jahnke: a descriptor has to be recovered

all the way up to the top level of hierarchy to obtain the hierarchical level of a portion of a descriptor.

Since Jahnke and Anderson, considered singly and in combination, do not disclose or suggest the feature that for at least one of the relations the information describing the descriptor structure includes an indicator for a hierarchical level of each of the portions of the plurality of the common formats within the descriptors, as recited in amended claims 1, 10, and 11, these claims, and their respective dependent claims, are patentable over the two references.

In view of the foregoing remarks/arguments, Applicants believe that this application stands in condition for allowance. Accordingly, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the Applicants' attorney at (609) 734-6813, so that a mutually convenient date and time for a telephonic interview may be scheduled. No fee is believed due. However, if a fee is due, please charge the fee to Deposit Account 07-0832.

Respectfully submitted,

By 
Reitseng Lin
Reg. No. 42,804
Phone (609) 734-6813

Patent Operations
Thomson Licensing LLC
P.O. Box 5312
Princeton, New Jersey 08540
October 15, 2007

CERTIFICATE OF MAILING

I hereby certify that this amendment is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on:

Date _____